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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,495	08/03/2001	Robert C. Stoneman	CT1108	7647

27548 7590 08/28/2002

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EXAMINER

VY, HUNG T

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,495

Applicant(s)

STONEMAN ET AL.

Examiner

Hung T Vy

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-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

DETAILED ACTION

Acknowledges

1. Receipt is acknowledged of the following items from the Applicant.

Information Disclosure Statement (IDS) filed on 02/19/2002 and made of record as Paper No. 2.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 16-28 and 40-48 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Scheps, U.S. patent No. 6,404,785 in view of Muller et al., U.S. patent No. 5,963,575.

Regarding to claims 1 and 25, Scheps disclose a method for producing laser radiation and a device for producing laser radiation comprising: a laser diode (102); a guide-wave laser (112) coupled to receive the output emission of the laser diode. (See column 2, line 53 – 55 and column 4, line 0 -10

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And fig. 2)

Scheps does not disclose an Er-doped solid-state crystal laser being pumped by the wave-guide laser. However, Muller et al disclose an Er-doped solid-state crystal laser (2.1) (See column 3. line 0-3 and Fig 1a and 1b) being pumped by the wave-guide laser (112) for the advantageous benefit of a wavelength longer than 1.4 micros as invention. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Scheps by having the Er-doped solid state crystal laser as taught by Muller so as to gain the advantageous benefit of a

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wavelength longer than 1.4 microns as invention.

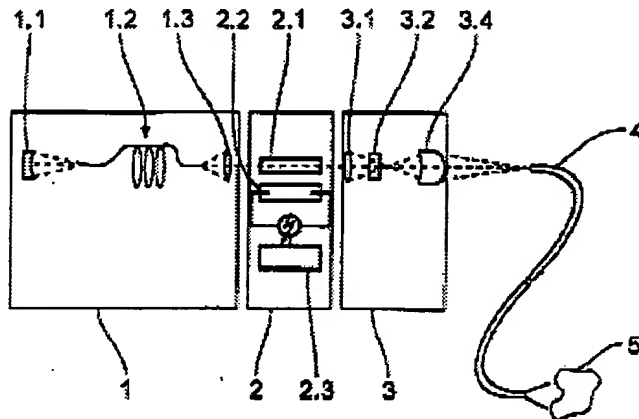


Fig. 1a

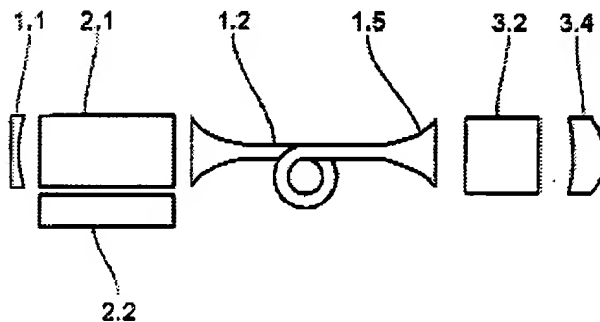


Fig. 1b

Regarding to claims 2-4, 16 – 21, 26-28 and 40-45, Muller et al. has discussed the Er-doped solid-state crystal comprises material selected from group YAG, YSSG (See column 3, line 55 – 63), and Q-switch (3.2) (See column 3, line column 5 – 8) to enable to production of Q-switched output having high pulse energies (see column 3, line 39 – 50). The output pulse width to between 0.1 microseconds and 1 microseconds (See column 3, line 21 – 22 as 200 ns to 1 microseconds). The solid crystal laser

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produces laser radiation at a predetermined wavelength of 1.55 to 1.7 microns, 1.643 to 1.648 microns and 1.644 microns to 1.645 microns (see column 3, line 56 – 58)

Regarding to claims 22-24, and 46 – 48, Muller et al. discloses the claimed invention as Er-doped solid-state laser except for dopant concentration of the Er-doped solid-state of laser from 1% to 5%. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have that concentrate, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

4. Claims 5 –15 and 29 – 39 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Scheps, U.S. patent No. 6,404,785 in view of Muller et al. U.S. patent No. 5,963,575. and Anthon, U.S. Patent. 5,644,589.

Regarding to claims 5-15 and 29 - 39, Scheps discloses the guided-wave laser but he uses different material to make the guided wave laser. However, ~~because~~ Anthon discloses Yb, Er-doped waveguide laser with wavelength 800nm to 1100nm (See column 1, line 26 – 33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have different material then depend on material, they will have different wavelength, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Citation of Pertinent References

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Suzuki discloses Double Wavelength Laser, U.S. Patent No. 5,841,801.

The patent to Rise et al. disclose Photodynamic therapy System and Method using a Phased Array Raman Laser Amplifier, U.S. Patent No. 6,200,309.

The patent to Manako et al. disclose ER:YVO₄ Laser Oscillator, Solid-State Laser Material and Method For Manufacturing The Same, U.S. Patent No. 5,402,434.

The patent to Wolfram et al. disclose Optically Pumped Laser, U.S. Patent No. 4,901,330.

Conclusion

6. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.


A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung VY whose telephone number is (703) 605-0757. The examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If

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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul IP can be reached on (703) 308-3098. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


QUYEN LEUNG
PRIMARY EXAMINER

Hung T. Vy
Art Unit 2828

August, 20 2002


for
SPE Paul IP